compared two strategies based on hypothetical treatments: under strategy A, an antidepressant with high response rate/high SD rate was prescribed in first-line and an antidepressant with moderate response rate/low SD rate available in second-line; under strategy B, the positions of these two drugs were reversed. Efficacy and safety parameters were obtained from a meta-analysis and other parameters, from the literature. Costs were estimated for the UK, from payer perspective. **RESULTS:** The numbers of QALYs were estimated at 3.660 QALYs (SE=0.013) and 3.649 (SE=0.012) under strategies A and B respectively. Costs were estimated at £3,894 (SE=60) and £3,918 (SE=61). **CONCLUSIONS:** Positioning an antidepressant with moderate efficacy and reduced risk of SD before or after a treatment with high efficacy and average risk of SD had no significant impact in terms of average costs and QALYs. Thus, differences in efficacy and tolerability can offset each other. In practice, the choice of first-line treatment should take account of patient preferences.

PMH37

COST-EFFECTIVENESS OF INJECTABLE ATYPICAL LONG-ACTING ANTIPSYCHOTICS FOR CHRONIC SCHIZOPHRENIA IN POLAND

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OBJECTIVES: To determine the cost-effectiveness of paliperidone palmitate (PP-LAI; paliperidone long-acting injectable), a new once-monthly long-acting antipsychotic therapy, compared with risperidone long-acting injectable (RLAI) administered biweekly for treating chronic schizophrenia in Poland from the National Health Fund (NHF) perspective. **METHODS:** We adapted a 1-year decision tree model to the Polish health care system with literature-derived data (e.g., length of stay in hospital, treatment patterns, resource utilization) and clinical expert inputs. Costs in 2012 euros were obtained from published sources or in case of non-reimbursed drug price, directly from producer. Drugs compared were PP-LAI, a new treatment option, and RLAI, the established treatment for Polish patients. Clinical rates were derived from published trials. Model outputs included expected cost/patient as well as rates of hospitalization, emergency room visits, days free of symptoms, and quality-adjusted life-years (QALYs). One-way sensitivity analyses were applied to major inputs. As well, all inputs were varied simultaneously in probabilistic sensitivity analyses using 10,000 iterations. **RESULTS:** Despite its higher acquisition cost, PP-LAI had a lower expected cost per patient treated when the benefits are included in the estimation model. PP-LAI was associated with 0.824 QALYS, 323 days with stable disease and 44.6% hospitalization. RIS-LAI had 0.817 QALY, 317 stable days and 51.3% hospitalizations. PP-LAI dominated RIS-LAI in the base case and in 55.0% of 10,000 simulations, and was cost-effective in 76.6%. However, cost-effectiveness was sensitive; it was lost with modest increases for PP-LAI or decreases for comparison drugs with respect to drug prices, relapse rates and adherence rates. Because it is injected monthly as opposed to biweekly, it saves caregiver time. **CONCLUSIONS:** From the viewpoint of the National Health Fund of Poland, as compared with RLAI, PP-LAI is a cost-effective drug that has the potential to reduce health care costs.

PMH38

MOOD STABILIZERS AND ATYPICAL ANTIPSYCHOTICS IN MAINTENANCE THERAPY FOR BIPOLAR DISORDER: A COST-EFFECTIVENESS ANALYSIS

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OBJECTIVES: To evaluate the cost-effectiveness of using a combination of atypical antipsychotic agents and mood stabilizers in maintenance treatment of bipolar disorder in Brazil **METHODS:** Analyzing cost-effectiveness, taking direct costs, from the perspective of Brazil's Ministry of Health and its public health system (local acronym SUS), using a Markov model with transitions between possible states: euthymia, mania, depression, discontinuation and death. Efficacy data to populate the model were extracted from clinical trials and prospective cohort studies while direct cost data came from the public health system's databases (current values of 2012, exchange rate: US$ 1 = R$ 2.21). For a hypothetical cohort of 2000 euthymic individuals aged 40, maintenance therapy costs and outcomes were simulated over quarterly cycles through a timeframe that reached an effectiveness of <1 day in remission, for up to 30 years. Discount rates and half-cycle correction were applied, also, sensitivity analyses were run. **RESULTS:** The available efficacy data enabled the analysis to include only a combination with quetiapine. After twelve years (48 cycles) tracking the hypothetical cohort, there were 512 acute episodes (285 depression and 227 mania) for monotherapy against 306 (166 depression and 139 mania) for the quetiapine combination. The incremental cost-effectiveness ratio (ICER) for the quetiapine combination therapy was US$ 565.64 per additional month in remission. The sensitivity analysis with all variables demonstrated the model's robustness, while dosage and quetiapine-price variations had most impact, showing an ICER ranging from US$ 381.88 to US$ 811.24 per additional month in remission. **CONCLUSIONS:** Maintaining the euthymia in bipolar disorder has a clinical relevance, especially, because of its impact on functional capacity in this population. In this context, in specific populations, the ICER shown may justify the use of the therapeutic strategy presented here. This reimbursement by public systems should also consider its budget impact.

PMH39

PATIENT-LEVEL MARKOV MODEL TO ASSESS ECONOMIC IMPACT OF NEW ANTIPSYCHOTICS INTRODUCTION IN SCHIZOPHRENIA

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OBJECTIVES: Antipsychotic treatments can cause several side effects, such as weight gain, metabolic syndrome, which could lead to cardiovascular complications (CVC). A number of models are available for the evaluation of the economic impact of antipsychotics in schizophrenia, but few of them properly consider metabolic syndrome and associated complications. The objective of this study was to build a new model to reflect the real patient therapeutic management of patients with schizophrenia. **METHODS:** An expert meeting was set up to validate the design of the model, and to list all outcomes that should be included in the model structure. The model was programmed in Excel 2010, with VBA coding. **RESULTS:** The expert meeting validated the premise that the aim of the treatment is to prevent relapses, affecting patients' quality of life and generating substantial costs. A patient-level Markov model structure was used, to simulate a cohort of patients with schizophrenia over lifetime, with 6-month cycles. Five lines of treatments are considered in the model. With up to 3 comparators in the first cycle, it models patients' treatment adjustment, and provides the flexibility to specify at any line of treatment a specific distribution of antipsychotics. The model considers treatment response, associated side effects (weight gain, sexual dysfunction, EPS and sedation), diabetes diagnosis and CVC (coronary heart disease and stroke). Non-response and compliance (based on side effects) drive relapse and hospitalization. Each relapse is assumed to require a treatment switch. Patients are also allowed to escape from the health care system, or to die, due to natural death, suicide or CVC-related death. Finally, extensive deterministic and probabilistic sensitivity analyses are also implemented. **CONCLUSIONS:** This new economic model allows taking into account all key features of schizophrenia, in a transparent way.

PMH40

COST-EFFECTIVENESS OF ASENAPINE VERSUS ATYPICAL ANTIPSYCHOTICS USED IN TURKEY IN THE TREATMENT OF SCHIZOPHRENIA

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OBJECTIVES: Asenapine is a new atypical antipsychotic approved in Turkey for the treatment of schizophrenia and bipolar I disorder. Asenapine has demonstrated comparable efficacy over olanzapine in controlling both positive and negative symptoms of schizophrenia in the long-term. However, unlike olanzapine, asenapine is associated with a favorable metabolic profile as well as with a minimal weight gain. Post-hoc analyses of a clinical study vs. olanzapine illustrated higher incidence of developing metabolic syndrome (MetS) with olanzapine than with asenapine after 52 weeks of treatment. The aim of this study is to assess the cost-effectiveness of asenapine in schizophrenia compared with the most widely used atypical antipsychotics in Turkey with a focus on the long-term consequences of MetS which increases the risk of diabetes and cardiovascular diseases (CVD). **METHODS:** Perspective of National Pharmaceutical Reimbursement Authority was applied and life expectancy horizon was adopted. Annual risks of metabolic syndrome were derived from randomized clinical studies of asenapine and indirect comparison of other atypical antipsychotics vs. olanzapine. Risks of developing diabetes and CVD were based on published risk models. Treatment costs associated with metabolic consequences as well as cost of atypical antipsychotics were derived from local sources. Number of diabetes and CVD avoided is used as effectiveness measure in the model. **RESULTS:** Asenapine dominates (more effective and less expensive) all atypical antipsychotics in the treatment of schizophrenia. Compared to olanzapine, quetiapine, aripiprazole, risperidone and paliperidone (all genericized except paliperidone), asenapine was associated with incremental total costs of 1908 TL, 1298 TL, 314 TL, 841 TL and 1958 TL; and associated with incremental total number of diabetes & CVD avoided of 0.046, 0.029, 0.001, 0.028 and 0.028 respectively. **CONCLUSIONS:** The lower incidence of developing MetS associated with asenapine compared to olanzapine and other atypicals is associated with lower treatment costs and lower incidence of diabetes and CVD in Turkey.

PMH41

COST-EFFECTIVENESS OF ASENAPINE VERSUS ATYPICAL ANTIPSYCHOTICS USED IN TURKEY IN THE TREATMENT OF BIPOLAR I DISORDER

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OBJECTIVES: Asenapine is a new atypical antipsychotic approved in Turkey for the treatment of bipolar I disorder (BD-I) and schizophrenia. Asenapine has demonstrated comparable antimanic efficacy over olanzapine in a head-to-head study. However, unlike olanzapine, asenapine is associated with a favorable metabolic profile as well as with a minimal weight gain. Post-hoc analyses of a clinical study vs. olanzapine illustrated higher incidence of developing metabolic syndrome (MetS) with olanzapine than with asenapine after 52 weeks of treatment. The aim of this study is to assess the cost-effectiveness of asenapine in the treatment of BD-I compared with the most widely used atypical antipsychotics with a focus on the long-term consequences of MetS which increases the risk of diabetes and cardiovascular diseases (CVD). **METHODS:** Perspective of National Pharmaceutical Reimbursement Authority was applied and life expectancy horizon was adopted. Risks of metabolic syndrome after 52 weeks of treatment were derived from randomized clinical studies of asenapine and indirect comparison of other atypical antipsychotics vs olanzapine. Risks of developing diabetes and CVD were based on published risk models. Treatment costs associated with metabolic consequences as well as cost of atypical antipsychotics were derived from local sources. Number of diabetes and CVD avoided is used as effectiveness measure in the model. **RESULTS:** Asenapine dominates (more effective and less expensive) all atypical antipsychotics in the treatment of BD-I. Compared to olanzapine, quetiapine, aripiprazole, risperidone and paliperidone (all genericized), asenapine was associated with incremental total costs of 2418 TL, 1786 TL, 804 TL and 877 TL; and associated with incremental total number of diabetes & CVD avoided of 0.054, 0.038, 0.010 and 0.037 respectively. **CONCLUSIONS:** The lower incidence of developing MetS associated with asenapine compared to olanzapine and other atypicals is associated with lower treatment costs and lower incidence of diabetes and CVD in Turkey.